POWER PLANT DESIGN
(Elective – I)

Course Code: 13CE 2108

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Course Educational Objectives: :

1. To impart the knowledge on power plants, chimneys and cooling towers
2. To familiarize the student with the design of ware house structures

Course Outcomes:

1. The students will be able to analyze and design of power plants, chimneys, cooling towers and ware house structures.
2. To impart the students, with the knowledge of intake towers.
3. To impart the students, with the knowledge of analysis of warehouse structures.

UNIT – I

Power Plants: Planning and Layout of different types of power plants.

Chimneys: Analysis and Design of Chimneys. IS codal provisions.

UNIT – II

Cooling Towers: Induced draught and natural draught cooling towers.

UNIT – III

Foundation: Machine foundations & Turbo generator foundations.

UNIT – IV

Intake Towers: Dams, wells and Intake galleries

UNIT – V

Storage Structures: Analysis and Design of ware house structures.

TEXT BOOKS:

1. Vijay K. Puri and Shamsher Prakash, *"Foundations for Machines: Analysis and Design (Series in Geotechnical Engineering)"*, 2nd Edition, John Wiley & Sons, 2000.

2. Krishna Raju N. *"Advanced Reinforced Concrete Design"*, 2nd Edition, CBS Publishers and Distributors, 2006.

REFERENCES:

1. Eldey Mc. K., Naxey Brooke K.K. *"The Industrial Cooling Tower with special reference to design, construction, operation and maintenance of water cooling tower"*, 1st Edition, Elsevier Publishing company, 1990.

2. Smith, Bryan Stafford & Alex C., *"Tall Building Structures & Analysis Design"*, 1st Edition, John Wiley, 2011.

3. Srinivasulu, P and Vaidyanathan, G.V., *"Handbook of Machine Foundations"*, 2nd Edition, Tata McGraw Hill, , 1999.

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